IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: K. HIGUCHI

Serial No.:   Not yet assigned

Filed: June 25, 2001

For: MULTI-BAND RADIO TERMINAL APPARATUS

Group: 2681

Examiner: F. Gary

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents   June 25, 2001
Washington, D.C. 20231

Sir:

     The following amendments and remarks are respectfully

submitted prior to the Rule 53(b) Continuation Application

filed on even date.

IN THE SPECIFICATION

     Please insert before the first line of the specification

the following:

--   This is a continuation of application Serial No.

09/261,179, filed March 3, 1999. --

IN THE CLAIMS

     Please cancel claims 1-6 without prejudice or disclaimer

of the subject matter thereof.

Please add new claim 7 as follows:

-- 7. A multi-band radio terminal apparatus comprising:

a transmitter/receiver for processing radio communication signals of a plurality of communication frequency bands, said radio communication signals being used to communicate with a base station;

a first frequency converter for frequency-converting the frequency bands of said radio communication signals between the communication frequency bands and an intermediate frequency band; and

a second frequency converter for converting said radio communication signals between base-band signals and an intermediate frequency signal,

wherein said first frequency converter includes:

one reception-sided mixer for converting a reception signal within the communication frequency band into another reception signal within the intermediate frequency band,

one transmission-sided mixer for converting a transmission signal within the intermediate frequency band into another transmission signal within the communication frequency band,

a first local oscillator for commonly suppling a local oscillator signal to both said reception-sided mixer and said transmission-sided mixer,

a second local oscillator for producing a second local
oscillator signal, and

a mixer for using said second local oscillator
signal so as to convert a transmission base-band signal into a
transmission intermediate frequency signal,

wherein said second local oscillator includes:

a plurality of oscillators having different
oscillating frequency from each other, and

a switch for selectively supplying the oscillator
outputs of said plural oscillators to said mixer,

wherein said switch selects a frequency out of said
different frequencies in response to the frequency band of the
radio signal used in the communication between the base
station and the multi-band radio terminal apparatus.--

IN THE ABSTRACT

Please replace the Abstract of the invention with the
attached new Abstract.

REMARKS

Entry of the above amendments prior to examination is
respectfully requested.

Please charge any shortage in fees due in connection with
the filing of this paper, or credit any overpayment of fees,

3

to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (500.36977CX1).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

Carl I. Brundidge
Registration No. 29,621

CIB/jdc
(703) 312-6600

4

Abstract

     In a multi-band radio terminal apparatus, even when
communication frequency bands are switched, a reception
intermediate frequency is selected to be equal to each other
in the respective different communication frequency bands.
The circuit arrangements of this multi-band radio terminal
apparatus succeeding to the intermediate frequency signal
circuit state are commonly used in the respective
communication frequency bands. A local oscillator signal is
produced by a voltage-controlled oscillator, a phase-locked
loop, and a doubler, such that a communication is established
within a plurality of communication frequency bands, the
transmission/reception frequency intervals of which are
different from each other. A mixer for reception system and a
mixer for a transmission system are commonly used to convert
the frequency of the local oscillator signal into a frequency
existing between the communication frequency and the
intermediate frequency.